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Device for Holding at Least Two Oblong Articles

The invention relates to a device for holding at least two oblong articles in accordance with the introductory clause of patent claim 1.

Such a device is known from GB-A 2 092 216. This device exhibits a receiving part which encloses a receiving space for the articles. The receiving part has an abutment section on which the first article introduced into the receiving part rests. In addition, also present are spring elements which are connected with the receiving part and which are for fixing the articles, whereby a spring element is configured as a locking tongue which can be moved transversely to the longitudinal direction of the receiving part between a deflected position and a rest position. The locking tongue exhibits at its free end a section that rests on the first article and, in the introduction direction upstream of the receiving section, an articulated element that protrudes into the receiving space when in the rest position, whereby when the first article is introduced, the free end is displaced into the deflected position when the articulated element contacts the first article. As a result, along with a few articles that are relatively thick in cross section, it is also possible to hold a larger number of articles that are relatively thin in cross section, whereby the articles always come to rest against each other. However, this is disadvantageous, especially in the case of relatively sensitive articles.

Another device for holding at least two oblong articles is known from US-A 4,437,633. This device has a receiving part into which oblong articles, e.g., pipelines or cable lines,

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can be introduced in an introduction direction. Elastic holding tongues, which are directed into the middle section of the receiving space and are to run towards each other in the introduction direction of the articles, are placed on side walls of the receiving part. The ends of holding tongues that are arranged between two articles hold the particular articles at a distance from each other, and the ends of the holding tongues that terminate the receiving space come to rest on the last article introduced. With this device, articles are indeed held from each other at a distance that approximately corresponds to the thickness of the holding tongues, but because of the elasticity of the holding tongues and the relatively close arrangement to each other, there is a danger that the articles will be displaced towards each other and will touch each other in the event of, for example, severe shaking. However, as was already mentioned with regard to the generic device, this is disadvantageous, especially in the case of relatively sensitive articles. A further disadvantage consists in the fact that the articles either cannot be removed from the device at all, or can be removed only by destroying or at least damaging the holding tongues.

The invention is based on the problem of creating a device of the type mentioned at the beginning, which is characterized by especially stable holding of oblong articles that are relatively thick in cross section at a relatively large distance from each other, and in which the articles can be easily removed from the receiving part despite the stable fixing.

In a device of the type mentioned at the beginning, this problem is solved inventively with the characterizing features of patent claim 1.

Through the fact that with the inventive device, as a result of the specific

configuration of the receiving space which encloses the first article at least in sections, the locking tongue is fixed and thus cannot be displaced after the first article is introduced, and that the articulated element connected with the locking tongue is arranged between two articles, the articles are very stably and reliably held at a distance from each other.

Practical embodiments of the invention are the object of the subclaims.

Additional practical configurations of the invention arise from the following description of an embodiment, with references to the figures of the drawing. The following are shown:

Fig. 1, a perspective view of an embodiment of an inventive device,

Fig. 2, a cross section of the embodiment per Fig. 1 during introduction of a first article, which is located in the area of an articulated element of a locking tongue,

Fig. 3, a cross section of the embodiment per Fig. 1 and Fig. 2 with the first article resting on an abutment section with fixed locking tongue, and

Fig. 4, a cross section of the embodiment per Figs. 1 through 3 with a second article resting on the articulated element.

Fig. 1 shows a perspective view of an embodiment of an inventive device made from a punched and bent metal sheet,

PATENT CLAIMS

1. Device for holding at least two oblong articles (26, 27) in an essentially parallel arrangement, with a receiving part (4) for receiving the articles (26, 27), which encloses a receiving space (5), whereby the receiving part (4) exhibits an abutment section (20, 21) on which the first article (26) introduced into the receiving part (4) rests, and with spring elements (8, 9, 12, 15) which are connected with the receiving part (4) and which are for fixing the articles (26, 27), whereby a spring element is configured as a locking tongue (15) which can be moved transversely to the longitudinal direction of the receiving part (4) between a deflected position and a rest position, and which exhibits at its free end a section (16) for the first article (26), and in the introduction direction upstream of the receiving section (16), an articulated element (17) that protrudes into the receiving space (5) when in the rest position, whereby when the first article (26) is introduced, the free end is displaced into the deflected position when the articulated element (17) contacts the first article (26), **characterized in that** the section at the free end of the locking tongue (15) is a bent receiving section (16) which, when the first article (26) comes to rest on the abutment section (20, 21), encloses the first article (26) to such an extent that the locking tongue (15) is fixed in the rest position and that the articulated element (17) is arranged between two areas of the receiving space (5), each of which receives an article (26, 27).
2. Device according to claim 1, characterized in that the side of the receiving section (16) facing the first article (26) is configured in

accordance with the abutment section (20, 21).

3. Device according to claim 1 or claim 2, characterized in that the articulated element (17) exhibits a front section (18) and a back section (19) that come together in a break region that projects into the receiving space (5).
4. Device according to one of the claims 1 through 3, characterized in that at least one additional spring element (22, 23) that lies opposite the articulated element (17) is present.
5. Device according to claim 4, characterized in that the or each spring element that lies opposite articulated element (17) is configured as a counter-tongue (22, 23) with a projection that lies opposite the most raised region of the articulated element (17).
6. Device according to claim 5, characterized in that the or each projection is formed by a front section (24) and a back section (25), which come together in a break region that projects into the receiving space (5).